

**Notice of Allowability**

Application No.

09/639,684

Examiner

Courtney Thomas

Applicant(s)

RUNNOE, DENNIS H.

Art Unit

2882

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the appeal brief filed: 10/13/05.
2. ☒ The allowed claim(s) is/are 8,57,59-69,71-81,83-86 and 88-94.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                    |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|   | 9. <input type="checkbox"/> Other _____.   |

## **DETAILED ACTION**

### **EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Peter Malen Jr. (45,476) on Wednesday, January 18, 2006.

The application has been amended as follows:

In claim 8, line 12, "and the emitter defining a cutout;" has been replaced by --and the emitter including at least one cutout;--

In claim 67, lines 5-6, "electrical current such that thermionic emission of electrons from the emitter is facilitated;" has been replaced by --electrical current such that thermionic emission of electrons from the emitter is facilitated, wherein the emitter includes at least one cutout;--

Cancel claim 70.

In claim 78, lines 3-4, "and the emitter defining a cutout;" has been replaced by -- and the emitter including at least one cutout;--

In claim 84, line 11, "surface; " has been replaced by --surface, wherein the emitter includes at least one cutout;--

Cancel claim 87.

*Allowable Subject Matter*

2. Claims 8, 57, 59-69, 71-81, 83-86 and 88-94 are allowed.
3. The following is an examiner's statement of reasons for allowance:
4. **As per claim 8 and dependent claims 57 and 59-65**, the examiner found no reference in the prior art that disclosed or made obvious an integral cathode comprising: an emitter configured to receive a flow of electrical current such that thermionic emission of electrons from the emitter is facilitated, said emitter having a predetermined geometrical configuration oriented to cause at least some emitted electrons to be directed at the target surface of the target anode and converge at a focal spot, wherein said predetermined geometrical configuration provides an emitter having a cross-section substantially in the shape of an arc so that a concave side of said emitter is directed towards the target surface of the anode, and the emitter including at least one cutout, as recited in independent claim 8.
5. **As per claim 67 and dependent claims 68, 69, 71-77**, the examiner found no reference in the prior art that disclosed or made obvious an integral cathode comprising: an emitter substantially comprising an emissive surface having a shape configured to direct a majority of electrons emitted from spatially diverse locations on the emissive surface to a common focal point, the emitter being configured to receive a flow of electrical current such that thermionic emission of electrons from the emitter is facilitated, wherein the emitter includes at least one cutout, as recited in independent claim 67.
6. **As per claim 78 and dependent claims 79-81 and 83**, the examiner found no reference in the prior art that disclosed or made obvious an integral cathode comprising: an emitter substantially comprising a substantially concave emissive surface configured to be oriented

Art Unit: 2882

toward a target surface of a target anode, and the emitter including at least one cutout, as recited in independent claim 78.

7. **As per claim 84 and dependent claims 85, 86 and 88-94**, the examiner found no reference in the prior art that disclosed or made obvious an X-ray device comprising: an emitter substantially comprising an emissive surface having a shape configured to direct a majority of electrons emitted from spatially diverse locations on the emissive surface to a common focal point proximate the target surface, wherein the emitter includes at least one cutout, as recited in independent claim 84.

8. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Courtney Thomas whose telephone number is (571) 272-2496. The examiner can normally be reached on M - F (9 am - 5 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (571) 272 2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2882

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink that reads "Courtney Thomas". The signature is written in a cursive style with a large, stylized "T" at the end.

Courtney Thomas  
Examiner  
Art Unit 2882